

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A heat spreader having a top surface and a bottom surface, comprising:
a bypass capacitor embedded within the heat spreader, the bypass capacitor having a first plate, a second plate, a dielectric between the first and second plates, a first terminal coupled to the first plate, and a second terminal coupled to the second plate, wherein the first terminal and the first plate are electrically insulated from the second terminal and the second plate, wherein the heat spreader is operable to transfer heat between the top and bottom surfaces of the heat spreader.
2. (Original) The heat spreader of claim 1, wherein the bypass capacitor is embedded within a lid of the heat spreader.
3. (Withdrawn) The heat spreader of claim 2, wherein the bypass capacitor is embedded within the lid where the first and second plates are in a comb-type construction.
4. (Original) The heat spreader of claim 2, wherein the bypass capacitor is embedded within the lid where the first and second plates are in a wrapped-type construction.
5. (Original) The heat spreader of claim 1, wherein the first terminal and the second terminal are located on the bottom surface of the heat spreader.
6. (Withdrawn) The heat spreader of claim 2, wherein the lid includes a top cover connected to the first terminal and a bottom cover connected to the second terminal, the top cover being insulated from the bottom cover.
7. (Withdrawn) The heat spreader of claim 2, wherein the lid is a channel type lid.

8. (Original) The heat spreader of claim 1, wherein the bypass capacitor is embedded within a stiffener of the heat spreader.

9. (Original) The heat spreader of claim 1, further comprising:

a second bypass capacitor embedded within the heat spreader, the second bypass capacitor having a third plate, a fourth plate, a second dielectric between the third and fourth plates, a third terminal coupled to the third plate, and a fourth terminal coupled to the fourth plate, wherein the third terminal and the third plate are electrically insulated from the fourth terminal and the fourth plate.

10. (Original) The heat spreader of claim 9, wherein the second bypass capacitor is embedded within a stiffener of the heat spreader.

11. (Original) The heat spreader of claim 10, wherein the second bypass capacitor is embedded within the stiffener where the third and fourth plates are in a comb-type construction.

12. (Original) The heat spreader of claim 10, wherein the second bypass capacitor is embedded within the stiffener where the third and fourth plates are in a wrapped-type construction.

13. (Original) The heat spreader of claim 1, wherein the first and second plates are made of a material selected from the group consisting of Cu, Al, Pt, and Au.

14. (Original) The heat spreader of claim 1, wherein the first and second dielectrics have a dielectric constant in the range of 10 and 1000.

15-35. (Canceled)

36. (Previously Presented) The heat spreader of claim 1, wherein the top and bottom surfaces are completely made of metal.

37. (Previously Presented) The heat spreader of claim 1, wherein the bottom surface is operable to receive a corresponding surface of a die.